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Reacting to Political Videos: The Potential of Danmaku

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Abstract
Commenting mechanisms allow people to react to online videos by sharing their thoughts and feelings. The most common type of commenting mechanism for video progressively appends comments as an ordered list beneath a video player window. 'Danmaku' is an alternative technique which dynamically superimposes comments over video content. We report an exploratory qualitative analysis of 20 participants' reactions to these mechanisms when applied to the context of political speeches. Our analysis suggests that Danmaku is more engaging but forces splitting of attention between comments and content of the speeches. In addition, Danmaku may encourage users to leave more playful comments whereas appended comments may foster more serious reflection on the political content of a video.

Author Keywords
Comments; Danmaku; Political Video.

Introduction
Online video hosting services such as *YouTube*, *Vimeo*, and *Facebook Video* typically provide mechanisms for users to engage with video content through comments and reactions to videos. Comments support discussion of media [6] and this discussion can help users to make more well-informed judgments about the quality of content [1]. However, interactions between people via comments can be problematic,

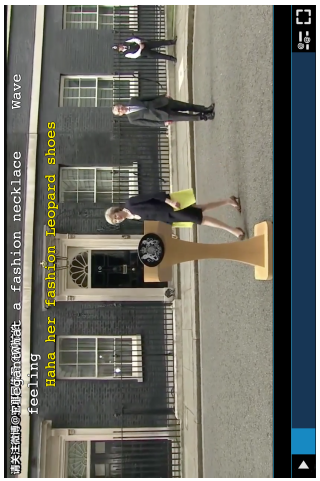

Figure 1: Danmaku player: Comments scrolling overlaying the video from right to left, covering not more than the top 30% of the video

especially those concerning political speeches or televised debates. Comments are not always written in a constructive, equitable or inclusive way, and can even spiral into episodes of conflict between people who do not share a common viewpoint [5]. This means that the potential value of commenting in assisting reflection and mutual recognition of others' concerns may be lost, as negative reactions to feedback may stifle further engagement [4].

Our current research is concerned with the potential for interaction design to encourage constructive discussion of politically contextualised media [8]. At the time of writing, we are exploring the potential for different commenting mechanisms to be leveraged in pursuit of this goal. This poster explores the potential of 'Danmaku' comments to foster a different style of engagement with political videos compared to more familiar appended comments. Danmaku is a style of commenting in which users' comments overlay a video to create an interactive viewing experience [2, 6]. Thus, rather than appearing beneath a video in a 'forum style' ordered list [6], Danmaku embeds users' comments within the video itself, allowing people to view both the video content and users' reactions to it simultaneously.

Previous research has shown that Danmaku commenting creates a social experience in which users can enjoy reading and responding to others' thoughts while watching videos [3]. Reflecting this, platforms such as Facebook now allow users' comments and reactions to be embedded as an overlay on live videos. However, this functionality has the potential to obscure video content [2], which may distract users from engaging with the video's actual subject matter [7]. Danmaku comments can contribute to a social and fun experience but have been described as overly critical and may evidence only superficial engagement with the content of a video [7]. We wanted to study whether similar qualities might still be in evidence when Danmaku is applied to political videos and, if so, what this might mean for constructive discussion in this context.

Exploratory Study: Early Findings

An exploratory study was run to investigate how Danmaku could work with political speeches. The study was run in a quiet laboratory at the University of Bath. 20 participants (12 male, 8 female; all attending university) were recruited through email and word-of-mouth advertisement. Each participant watched videos of two speeches by UK politicians David Cameron and Theresa May, filmed outside No. 10 Downing Street, London. (Each was leader of the UK Conservative Party at the time their respective speech was recorded.) Each video was displayed with either a Danmaku player (Figure 1) or an appended comment player (Figure 2) that showed a sample of real user comments while the video was playing. These comments were left by previous viewers on *Bilibili*[1], a Danmaku video sharing website in China. Comments were translated into English by the first author. To control for order effects, viewing order was counterbalanced both by clip and player style. Participants were allowed to interact with the player by using the Play, Pause and Rewind buttons whenever they wished, but could not leave their own comments. After watching each clip, participants completed a questionnaire and a semi-structured interview about their reaction to the video and opinion of the comments they had seen. Participants were also asked what comments they would have liked to leave on the video and to write examples of such comments in their questionnaire. All sessions were video recorded and the interviews were transcribed. This paper reports findings from a thematic analysis of the qualitative data collected in the interviews and questionnaires.

[1] https://www.bilibili.com

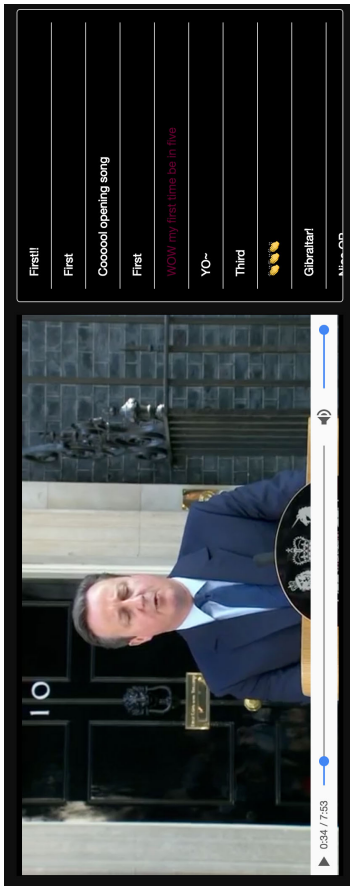

Figure 2: Appended player: Comments in a separate panel on the right, can be manually scrolled down asynchronously

Engagement and Social Experience
Danmaku comments combine users' reactions with the scene naturally and some participants noticed and appreciated this linkage. Participant 5 (P5) felt that Danmaku allowed him to understand *"directly what this comment is commenting"*, i.e. he was able to link comments with specific video content. Similarly, P6 said, *"it seemed pretty clear how all the comments came about and what they are thinking"*. This was reported as difficult with the appended comments. P13 recalled *"I don't think it is related to the content"*, while P11 reported *"sometimes I read the words but couldn't remember the content of the video"*.

Participants also reported feeling like they were interacting with other viewers when reacting to Danmaku comments. P2 felt he was *"staying together with others"* while watching the Danmaku video and that he was *"more interested to see what others think during watching the video"*. This supports the findings of Yao et al., who found that Danmaku comments created a social experience in online learning [7]. P17 found Danmaku made her *"more interested in watching the video even if it is about politics"*, suggesting that Danmaku may motivate engagement with challenging content.

Motivation for Commenting
Comparisons of the comments that participants wanted to leave on the videos suggested that participants responded to Danmaku in a playful manner. Sidebar 1 shows some examples from our data. P15 responded by asking *"where is the cat?"* (a reference to Larry, the Prime Minister's resident cat) on the Danmaku comments, whereas the reaction to the appended commenting video was *"great speech"*. Participants P2 and P5 commented about Theresa May's appearance in the video, and P11 asked about a bystander in the background of the video with Danmaku comments.

By contrast, appended comments were overwhelmingly to do with the content of the speech itself.

Ma and Cao found that most users post Danmaku comments using everyday vocabulary and Internet slang, and many also include emotion words [2]. The variety of expressive forms used by viewers to share their thoughts may give users additional motivations to leave more entertaining comments.

Overlapping Comments
Ma and Cao [2] found that users tend to repeat phrases from the videos or others' posts in Danmaku, creating a build-up of similar reactions. This leads to an atmosphere in which users emphasize the comments or simply repeat the emotive reactions [2] rather than reflect on the video content. In our study, P2 was repeating the word *"hot"* from the Danmaku comments. P15's question about the cat and P11's about the bystander were responses to similar comments in the video. This suggests that people may simply repeat what they see when reacting to Danmaku, rather than reflecting on it critically. This could underpin a tendency for people to remember more comments in Danmaku than appended commenting mechanisms [8]. Also in this way, the users may intend to show that they agree with the previous comment since addressing a specific prior comment is challenging in Danmaku. Comment threading is strong with appending mechanisms but weakly supported by simple overlay [2].

Discussion and Conclusion

Politically contextualised media provide opportunities for users to share and discuss thoughts with others on the Internet. This study explored the potential of a design landscape for constructive political engagement that includes Danmaku commenting on political videos. Our early find-

Sidebar 1

Comments to add on each video (D:Danmaku, A: Appended)

P2
D - "Hot prime minister."
A - "The prime minister is running away."

P5
D - "May is a beautiful girl. "

P6
D - "May is a woman with powerful."
A - "I agree with what Cameron said and I feel impressive by his speech"

P11
D - Maybe at the end of the video, "Who is the man next to May."
A - "Interesting, British people is interesting. "

P15
D - "Where is the cat?"
A - "Great speech."

P16
D - "She has to be another strong leader in Britain."
A - "Cameron is the escaper. He just started the referendum but in the middle of the difficult time he escaped"

ings suggest that Danmaku exchange may encourage people to read more comments and produce entertaining responses. Danmaku could therefore help to foster a more relaxed style of engagement in which users feel more comfortable to share responses to political media. However, these reactions appear to be more jovial and superficial, whereas responses to appended commenting were serious and less emotional. Appended commenting may therefore be better suited for fostering reflective discussion around the topic of the video. This suggests that designers could invoke approaches to commenting selectively, depending on whether the goal is to promote a 'fun' experience or to promote discussion.

From a functional perspective, our participants reported some challenges in engaging with the granular content of videos and the discussions when using Danmaku, mainly because Danmaku occludes the video content. However, Danmaku communities typically use most comments as a relatively simple channel to share snippets of information and to vent emotions [2]. Political debates may require comments that are simply too involved to fit in short visible comments. Therefore, future work should address the design of commenting mechanisms as one part of an integrated suite of tools, if constructive political debate is to benefit from videos augmented with Danmaku comments.

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